

WM-1 STAGING AND MATERIALS SITE MANAGEMENT

Refer to: ITD Standard Specifications, Sections 107.11, 107.17.
ITD Standard Drawings P-1-D, P-3-E, P-5-A.



BMP Objectives

- Perimeter Control
- Slope Protection
- Borrow and Stockpiles
- Drainage Areas
- Sediment Trapping
- Stream Protection
- Temporary Stabilizing
- Permanent Stabilizing

Definition and Purpose

Staging and storage areas within or adjacent to construction sites can be significant sources of pollution. Areas will be located, constructed, and maintained so that no contaminated stormwater, solid waste, trash or debris, or dust is discharged or released from the site.

Considerations

- Preventative and control measures may include diverting non-contaminated runoff, as well as collecting, conveying, impounding, storing, treating, and containing contaminated stormwater within or adjacent to construction sites.
- A wash station may be required to prevent transporting noxious weeds and contaminated soils off-site, or to address track out onto paved surfaces.
- An excavated containment area or similar space or device may be needed to capture material from leaks, spills or wash-down water.
- Prevent stormwater from coming into contact with the equipment or materials through the use of enclosures or covers over equipment, material sites, or hazardous material storage areas.
- Preventative measures to control dust may need to be employed.

Appropriate Applications

Various control measures include:

- **Stormwater conveyances**, such as channels, ditches, dikes, berms, drains, gutters, or sediment traps that can be constructed or lined with different materials such as concrete, asphalt, aggregate, riprap, or geosynthetics to control and direct stormwater.

- **Equipment wash station(s)** to contain and dispose of mud, dust, and noxious weeds that otherwise would be transported off-site.
- **Containment dikes, berms, curbing, collection basins, sumps, or drip pans** to capture and dispose of chemical or hazardous material leaks or spills.
- **Enclosures, covers, or soil binders** to protect staging and maintenance areas and materials such as topsoil, waste stockpiles, aggregate, sand, salts, liquids, solids, compost, or hazardous materials from stormwater contamination and movement due to wind or runoff.

Limitations

- Stormwater conveyance systems concentrate runoff and require maintenance. They can be expensive to install and space requirements may limit their practicality.
- Dikes or berms may not be suitable for large drainage areas. In addition, dikes, berms, curbs, collection basins, sumps, and liners used for leak and spill containment may require constant maintenance to ensure proper operation.
- Graded or paved areas will increase runoff flows and require special attention during heavy precipitation.
- Wash stations generate pollutants that must be contained and disposed of properly. Discharge of wash water into Waters of the U.S. requires specific treatment and must meet receiving water quality standards.
- A lack of understanding and poor assessment of the potential problems associated with handling and disposing hazardous materials may result in soil or water contamination and jeopardize worker safety.
- The cover or enclosure that is built or installed over certain activities or materials may pose health or safety problems.

Design Parameters

- Install conveyance systems during initial phases of construction.
- Construct dikes, berms, ditches, channels, and sediment traps of sufficient size, depth, or height to handle anticipated runoff.
- Incorporate graded or paved areas as control and containment measures to direct runoff to treatment facilities.
- Wash stations should be installed in isolated areas and shall be at least 300 feet from streams and wetlands, and at least 500 feet from private or public wells.
- Design leak and spill containment sites large enough to hold an amount equal to 110 percent of the storage tank capacity at the particular site. Materials used to construct the dike should be of sufficient quality and strength to safely hold any spilled material.
- Isolate hazardous material sites, for either waste or storage, out of the way of main traffic areas. If possible, provide cover and secure the area.

- When installing a cover or enclosure, evaluate the strength and longevity of the covering materials, as well as compatibility and safety with the materials being enclosed or covered. Allow for adequate access for loading, handling, and transfer. Ensure proper ventilation.

Construction Guidelines

- The Contractor shall construct staging and storage areas prior to project construction and following the Standard Specifications, and as approved by the Engineer.
- Wastewater shall be collected or directed from vehicle or equipment wash stations to a containment or treatment system. An impermeable liner may be required with pollutants such as oil, grease, fuel, asphalt, etc. If noxious weeds are present, an extensive vehicle and undercarriage wash will be required.
- Specific construction requirements shall be used for hazardous materials storage and leak/spill containment facilities. Construct per the contract specifications or other permitting requirements.
- Special care shall be given to avoid contamination of stormwater with outside storage materials by preventing precipitation from coming in contact with the materials. This can be accomplished by covering the area or by covering the material itself with protective roofing or a temporary flexible covering. Installing curbs or berms around the material also helps prevent contact from runoff water.
- Roofs, sheds, or buildings shall be constructed according to plans and drawings in accordance with current building codes and departmental standards. Securely anchor and, if necessary, ventilate temporary coverings or plastic sheets. All material shall be secured.

Regulatory Notes

- Water used to wash vehicles must be specifically identified in the SWPPP as a potential non-stormwater discharge.
- Leak and spill containment systems may require local authorization and inspection.
- In the event of a reported spill (40 CFR, Section 302.5), the Contractor shall notify the Engineer immediately. The Engineer shall notify the ITD Hazardous Materials Coordinator who shall notify the National Response Center hotline at (800) 424-8802 to report the type of material spilled and quantity. If the ITD Hazardous Materials Coordinator is not available, State Communications 800-632-8000 shall be notified.
- If runoff is discharged into an off-site sewer or treatment facility, the Contractor shall consult with the operator of the facility to see if there are any special requirements, restrictions, or permits.
- Noncompliance with regulations may result in regulatory enforcement, including fines or shutdown of the operation.
- No fill material shall be discharged into waters of the United States, unless authorized by the Clean Water Act (CWA) and Section 404 permit.

- Local authorities may have stricter requirements. These authorities shall be checked with for area/site specific concerns.

Maintenance and Inspection

- Conduct inspections as required by the NPDES permit or contract specifications.
- Repair eroded unpaved graded areas to ensure they are draining properly and that the discharge point is not clogged. Remove debris that may clog the system and repair any damage.
- Remove sediments from sediment traps and dispose of properly.
- Clean up and properly dispose of any mud or sediments that may be considered trackout by the end of the work day.
- Repair and stabilize dikes and curbs immediately.
- Repair or replace structural and flexible coverings as needed.
- Pick up all garbage and waste material, and dispose of it properly.
- Assign an employee to be responsible for hazardous materials and keep the inventory up-to-date. Label all containers with proper identification of the contents. Keep Material Safety Data Sheets (MSDSs) and spill and containment kits at the site. Review safety procedures for each hazardous material stored on-site.